REMARKS

In an Office Action mailed on March 23, 2005, an objection was made to the specification; an objection was made to claim 16; claims 1-3, 5, 8-10 and 18 were rejected under 35 U.S.C. § 102(e) as being anticipated by Kurlenya; claims 1-3, 6, 8, 9 and 18 were rejected under 35 U.S.C. § 102(b) as being anticipated by Rogen; claims 1-3, 8, 9, 11-15 and 17 were rejected under 35 U.S.C. § 102(b) as being anticipated by Payton; claims 1, 4, 8 and 9 were rejected under 35 U.S.C. § 102(b) as being anticipated by Coronado; claims 1 and 7-9 were rejected under 35 U.S.C. § 102(b) as being anticipated by Loy; claims 14-16 and 21 were rejected under 35 U.S.C. § 102(b) as being anticipated by Arizmendi; and claims 18-20 were rejected under 35 U.S.C. § 102(b) as being anticipated by Oneal.

Claim 16 has been amended to overcome the corresponding objection. Regarding the objections to claims 19 and 20, at least paragraph 29 of the specification describes a spring 26, which is described as being one embodiment of the energizing element 20. Because the skilled artisan would recognize that a spring is elastic and would constitute at least one embodiment of an "elastic substrate," withdrawal of the corresponding objections to claims 19 and 20 is requested. Of course, other embodiments of an "elastic substrate" are possible and are within the scope of claims 19 and 20.

Newly-added independent claims 22, 25, 28 and 29 are patentable over the cited art for at least the reason that none of the cited art teaches or suggests the bow of claim 22, the tube of claim 25, the swelling material of claim 28 or the container of claim 29. More specifically, the bow of claim 22 is adapted to remain retracted while the packer is run into a well, a feature not disclosed in, for example, Loy, as further discussed below. The tube of independent claim 25 is adapted to radially extend against a support sleeve to establish a sealing contact between a sealing layer and a wall and thus, includes features not discloses in Payton's packer cup, as further discussed below. Additionally, none of the cited references teach or suggest a swelling material that is adapted to mix with a reactant to radially extend against a support sleeve as set forth in claim 28 or a container that is adapted to receive and be energized by a compressible material, as set forth independent claim 29. Therefore, allowance of newly-added claims 22-30 is requested.

The § 102 rejections are addressed below.

§ 102 Rejections of Claims 1-3, 6 and 8-13:

As amended, the seal element of independent claim 1 includes an energizing element that is adapted to store potential energy prior to the packer being run into a predetermined position in a well and a sealing layer that covers at least a portion of the energizing element. The energizing element is adapted to release at least some of the potential energy at the predetermined position to radially expand the energizing element and establish contact between the sealing layer and a wall that encloses the packer.

Contrary to the limitations of amended independent claim 1, Kurlenya discloses a cylinder 19 that expanded downhole for purposes of setting a packer 4 by activating a temperature-action element 14. *See, for example*, paragraph 114 of Kurlenya. Kurlenya does not, however, teach or even suggest an energizing element that is adapted to release potential energy (stored prior to the packer being run in the well) at a predetermined position in the well to radially expand an energizing element and establish contact between a sealing layer and a wall that encloses the packer; and thus, for at least this reason, Kurlenya fails to anticipate amended independent claim 1.

Rogen discloses springs 33 to expand a packer sleeve 27. However, the springs 33 are not adapted to release potential energy at a predetermined position in the well to expand an energizing element and establish contact between a sealing layer and a wall that encloses a packer. Thus, Rogen fails to anticipate amended independent claim 1.

Payton discloses a thermally energized packer cup that includes reinforcement elements 15. However, there is no teaching or even a suggestion in Payton regarding the elements 15 being adapted to release potential energy at a predetermined position to establish contact between a sealing layer and a wall that encloses a packer. As such, Rogen fails to anticipate amended independent claim 1.

Coronado generally discloses a reinforced steel mesh sleeve 42 whose "objective is to keep adjacent seal components from bonding to each other," as discussed in paragraph 22 of Coronado. However, Coronado does not teach or even suggest that the mesh sleeve 42 stores potential energy or is adapted to release at least some of stored potential energy at a predetermined position to radially expand the mesh to establish contact between a sealing layer and a wall that encloses a packer. Therefore, for at least this reason, Coronado fails to anticipate amended independent claim 1.

Loy generally discloses a tool that has packer cups 60. However, this tool is a pumping tool, not a packer, which is used form a loose seal between the tool and a tubing wall, as discussed in, for example, lines 13-26 in column 1 of Loy. Loy describes that the pumping tool maintains the contact until the springs of the tool are released so that the pumping tool may be retrieved uphole. Loy, 2:52-57. Loy does not disclose, however, that the springs are adapted to release potential energy in response to the pumping tool being in a particular position in the well. Instead, the pumping tool of Loy maintains the loose sealing connection with the inner wall of the tubing until collapse. As such, Loy fails to anticipate amended independent claim 1.

Therefore, for at least the reasons that are set forth above, none of the cited references anticipate amended independent claim 1. Claims 2-3, 6 and 8-13 are patentable for at least the reasons that these claims depend from an allowable claim. Therefore, withdrawal of the § 102 rejections of claims 1-3, 6 and 8-13 is requested.

§ 102 Rejections of Claims 14, 15 and 17:

As amended, the energized seal element of claim 14 includes an energizing element, a support sleeve and a sealing layer. The energizing element has an interior surface and an exterior surface. The support sleeve at least partially encloses the energizing element, and the sealing layer at least partially encloses the support sleeve. The interior and exterior surfaces are adapted to radially extend so that the energizing element presses against the support sleeve to establish a sealing contact between the sealing layer and a wall that encloses the packer.

Contrary to the limitations of amended independent claim 14, Arizmendi discloses a deformable material 26 that is contained in a sheath body 22. As depicted in Arizmendi in the various figures and described in the text, the deformable member material 26 substantially conforms to the inner surface of sheath body 22 before and after a force is applied to the deformable material 26. Thus, the deformable member material 26 does not contain an interior surface that radially expands, and for at least this reason, Arizmendi fails to anticipate amended independent claim 14.

Claims 15 and 17 are patentable for at least the reasons that these claims depend from an allowable independent claim. Thus, for at least the reasons that are set forth above, withdrawal of the § 102 rejections of claims 14-15 and 17 is requested.

§ 102 Rejections of Claims 18-20:

As amended, the method of independent claim 18 includes storing potential energy in a seal element of a packer before deploying the packer downhole in a well and after the storing, running the packer into the well. The method includes positioning the packer at a position in which a seal is to be formed in an annulus of the well and setting the packer by releasing at least some of potential energy to form a seal between the packer and a wall that surrounds the packer. The method includes maintaining the seal using at least some of the potential energy remaining in the potential energy stored in the energized seal element.

Contrary to the limitations of amended independent claim 18, Kurlenya describes a temperature activated sleeve 19, not a sleeve that releases potential energy downhole. Rogen discloses springs 33 that press against a seal element. However, Rogen fails to teach or even suggest that the springs store a potential energy that is used to set the disclosed packer. Instead, Rogen discloses a temperature activation of the springs 33 to set the packer. As such, Rogen fails to teach or even suggest amended independent claim 18. Oneal describes an extension assembly that is described as containing an intermediate portion 52 and upper 54 and lower extension members 56. Oneal does not, however, describe releasing a potential energy that is contained in the extension assembly 16 prior to being deployed into the well for purposes of forming the downhole seal. As such, Oneal fails to teach or even suggest amended independent claim 18.

Claims 19 and 20 are patentable for at least the reasons that these claims depend from an allowable claims. Thus, for at least the reasons that are set forth above, withdrawal of the § 102 rejections of claims 18-20 is requested.

CONCLUSION

In view of the foregoing, withdrawal of the § 102 rejections and a favorable action in the form of a Notice of Allowance are requested. The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 20-1504 (SHL.0268US).

Respectfully submitted,

Date: June 23, 2005

Dan C. Hu, Reg. No. 40,025
TROP, PRUNER & HU, P.C.
8554 KATY FREEWAY, SUITE 100
HOUSTON, TEXAS 77024
713/468-8880 [Phone]
713/468-8883 [Fax]